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LEPROSY,

ANCIENT AND MODERN;

WITH

NOTES TAKEN DURING RECENT TRAVEL IN THE EAST.

BY

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## LEPROSY, ANCIENT AND MODERN.

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IN thinking over the writings of some who have dealt largely with the literature of the ancients the feeling thrusts itself very decidedly upon our notice, that the rough details of bygone time are invested occasionally (it is to be admitted somewhat unknowingly) with such importance and significance as to constitute them the very standard of truth against which there is no appeal. This is especially the case with the writings of Celsus and Hippocrates. The subject of leprosy, amongst others, which of late has occupied the attention of many *literati*, is illustrative of the point in view. Our position in regard to it is one of doubt and misunderstanding, because up to the present time we have been unable to fathom the significance of the data by which the ancients were guided, and, according to the ideas of pathology now in favour, dovetail our own with the facts of former date. Under these circumstances we have adopted a convenient humility, and chosen to fancy that we are wrong and the ancients right; moreover, that by an examination of the laws of disease, as taught in the earliest days, we shall be able to mould the existent phenomena of our own day so as to fit the explanations thence derived. Little difference is made for variation in expression in language or mode of record between this and the oldest time; the same argument carried farther would attempt to show that little *progress* is visible.

I am ready to admit that the bold outline and crude material of descriptive medicine may have remained unaltered by the lapse of time, and that by a careful study of concomitants we shall be enabled to harmonize the phenomena of different epochs, and to explain modifications; but cannot subscribe to any opinion which tends to teach that any retrocession has taken place. But while differentiation and detail have most abundantly multiplied in the progress of knowledge, the sustainable point has been overstepped, and men have been required to withdraw certain conclusions which were at one or another time firmly held, for, in the development of the special from the general, an enormous mass of new species has

been elaborated which on subsequent observation have been found to be *mere varieties*, a phase of revocation which, culminating in the Darwin theory, is the characteristic of the age.

Still, on the whole, the preponderance of trustworthy result is immeasurably in favour of the student of to-day. Progress is traceable in everything except in one particular instance, to which my remarks will now be directed—the biblical account of leprosy. This cannot be judged in manner like to other descriptions. The objects and circumstances connected with it were special; Moses did not wish to teach medicine, but gave certain laws for the guidance and preservation of the Israelitish community—laws which the *priest* should observe, and which, whilst they were perfect *quoad* the end in view, contained only just the very necessary amount of pathology, and were not technically explained. There was sufficient difference in the nature of the forms of disease included under the term leprosy implied in the total difference of treatment. Some were clean and some unclean: Moses was under no necessity of defining pathological details. In the spirit of these remarks, I would be understood as vindicating the position of Moses on the ground of modern research.

Till within the last few years the solution of points of doubt in the matter of leprosy has seemed so very distant and unlikely as to have appeared a fitting subject to test the powers of a sphinx. Recently the accumulation of observations of small moment, *per se*, has been found to possess such potential interpretation and applicability as to have cleared the way very considerably for the establishment of satisfactory data. I have recently seen a good deal of leprosy during a lengthened tour in Egypt and Syria, and desire to call attention to particulars of its nomenclature and meaning (ancient and modern), without, however, aspiring to any such classical discussion as that which appeared from the pen of Dr Belcher, in a late issue of the Dublin Quarterly Journal, but to the hope of being able to reconcile some of the differences of opinion which have been held in regard to leprosy, using that term, to signify the elephantiasis græcorum, altogether different from the *E. arabum*, the Barbadoes leg, or, as it is termed now-a-days, *bucnemia tropica*. The term *lepra* has, by its peculiar and varied renderings at the hands of writers, been a source of no inconsiderable obstruction to the foundation of clear conceptions of diseased conditions of the surface. It has been used in four chief senses,—

As signifying (1.) a special affection, distinct from elephantiasis, and known to moderns as *lepra vulgaris* (Willan).

2. The same condition, but in the sense of its being an expression of true elephantiasis.

3. The *lepra* of Holy Writ, a disease supposed to be now non-existent, peculiar to the Hebrews, special in its nature, and different altogether from elephantiasis, and also *lepra vulgaris*. A view

originally propounded by Lorry and Ousseel, and recently Dr Belcher.

4. True elephantiasis itself, unconnected with modern lepra vulgaris.

In the Levitical code reference is made to many eruptions; but as concerning the subject of leprosy (elephantiasis), we observe that Moses referred to three superficial forms, independently of the fully-developed disease, (a) the boak or dull white; (b) the berat cecha or dusky berat; and (c) the berat lebena or bright white berat. Celsus arranges these under the term vitiligo; the first, or boak, corresponds to his *alphos*, the second to his *melas*, and the third to his *leuce*. Celsus, moreover, separated the developed disease elephantiasis from these superficial forms; hence Celsus and Moses apparently differ, but of this more in a moment. Now the Greeks made more confusion: with them the term lepra arose, and it is thought was applied to the alphos (boak), the highest degree of lichen (psora and alphos),—psora coming also from the Hebrew psorat. In the eleventh century, Avicenna inculcated and wrote the doctrines of the Greeks, and then arose another error; when the Arabian writings were translated into Latin the term lepra was given very unlicensed application, as explained by Bateman, to the elephantiasis of the Greeks, and the term morphœa was used to the scaly eruption called by the Greeks lepra; hence the general use of the term lepra and leprosy.

Now, it appears to me that an acceptable explanation of all pre-existing contradictions may be readily given, and particularly in consequence of the important observations which have been published by Dr H. Vandyke Carter of Bombay. That gentleman has shown clearly that there is a period of eruption in the majority of cases of leprosy in India: he noticed it himself in 62 of 186 cases. The eruption assumes two chief forms, a white and a dark variety, corresponding to the leuce and melas, and known as morphœa alba, and morphœa nigra. There is resemblance often to lepra vulgaris (alphos); and in India the confusion of these eruptions is common. This morphœa is the *baras* of the Arabs. There can now be no question as to the relation of morphœa and elephantiasis. It is the earliest sign of elephantiasis, and it is easy to understand the different positions of Moses and Celsus. The boak of Moses, which did not render a man unclean, is our lepra vulgaris, or the alphos of Celsus; the berat cecha corresponds to the melas or morphœa nigra; and the berat lebena to the leuce or morphœa alba. Moses did not use his own judgment,—he gave as he was commanded; but how curiously his teaching and Dr Carter's observations agree as regards pathology, and how each is mutually proof of the truth of the other. Celsus was not a Moses, and did not see the relation of the components of his vitiligo, that the melas and leuce were early stages of elephantiasis, and the alphos distinct again. Dr Carter's observations, I repeat, are opportune, and most conclusive. Josephus and others have only followed their predecessors in misplacing

alphos ; but the time had not come for its solution and separation. Dr Belcher, in his essay, refers to some remarks at p. 360 of Mr Wilson's work, where it is said that the term *mal rojo* used in Spain, calls attention to the dark red or reddish brown line of the skin, and *mal noir* to the dusky hue in some cases ; and says, it may well be asked how can *mal rojo* or *mal noir* be identical with the bright white *berat* of Moses, with the scaly *lepra* of the LXX., or with the disease of Gehazi, who went out of Elisha's presence as white as snow. The foregoing remarks explain that *mal rojo* and *mal noir* are but forms of *morphœa*. Mr Wilson, I think, does not imply that they had any relation with the disease of Gehazi, or the *lepra* of the Greeks (*alphos*). To put it in another way : the pathology of our own day teaches us (1.) *that Moses' two forms of berat, the leuce and melas of Celsus, and the forms known now-a-days as morphœa alba and nigra are the same, that they are early signs of elephantiasis ;* (2.) *that the boak of Moses, the alphos of Celsus, and our lepra vulgaris are one and the same disease.*

Moses did not refer to the fully developed disease,—the tubercular and anæsthetic and ulcerative alterations,—but to the earlier stages ; and he shows himself a great pathologist here ; he actually forestalled the observers of recent time. This is forgotten in all discussion, and is the chief reason why authorities declare that the Israelitish leprosy and the *elephantiasis græcorum* are not the same. If they compare together the *same stages* an absolute identity is visible. The results of modern research, to my own mind, give a peculiarly prophetic aspect to the Levitical code, and there cannot be a doubt that modern investigation has fully proved its truth.

And, in all this there is little ground for supposing that any change has taken place in the relative situation of the diseases themselves. The same forms existed formerly much in the same state as at the present day, and there is little, if any, reason to think that the Hebrews were affected by one special form of *lepra* of which no trace exists now-a-days.

Lorry contended for the past existence of such a form of disease, and Dr Belcher, at p. 297 of the Dublin Quarterly Journal, says, that there is abundant proof that the leprosy of the Hebrews and that of the Middle Ages were as dissimilar as wasting and hypertrophy can be,—quite true ; and at p. 298, that the Hebrew leprosy was the *vitiligo* of Celsus. This point has been referred to. Dr Belcher, in the article referred to, does not seem to allow that *lepra vulgaris* (Willan), the *alphos* of Celsus' *vitiligo*, and Moses' *boak* are the same ; in fact, this disallowance is the groundwork of Lorry's view, though I gather from the recent edition of Neligan's work that Dr Belcher has modified his opinion.

Whatever else Josephus states, he certainly most plainly states thus much, that there was no disease such as is contended for peculiar to the Jews. The supposition is unnecessary, and most confusing. But I have at hand a fact, which is altogether con-

vincing. During the last year (1865), in my travels through Egypt, Palestine, and Syria, seeing and hearing as much as possible about leprosy, curiously enough, I found in the vicinity of the Lebanon range, that a form of disease is common, of old date, and recognised as distinct from elephantiasis: it is called *baras el Israiliy*. I declare, from the description, character, and seat of the disease, that it is nothing more nor less than *lepra vulgaris* or *alphos*. Now, here is, without a doubt, Lorry's Hebrew eruption handed down to us by the Arabs and others, under the most peculiar designation, and yet it is found to be not a special, but the well-known boak of Moses. Ay, and yet more than this, there is an eruption like it of a dark scaly aspect, which is distinguished from it, and which is regarded as an early state of elephantiasis. It is the *baras* of the Arabs. These are very important facts, to my mind, because they are so completely and peculiarly confirmatory of all that has been said.

Though we may clear up all difficulty with regard to the ancient relations of *lepra* and leprosy, yet perhaps a greater one remains in the determination of the use of the term *lepra* now-a-days. It is a quarrel about words, and admirably does Max Müller observe, "yet under a different form, language retains her silent charm; and if it no longer creates gods and heroes, it creates many a name that receives a similar worship. He who would examine the influence which words, mere words, have exercised on the minds of men, might write a history of the world that would teach us more than any which we yet possess. Words without definite meaning are at the bottom of nearly all our philosophical and religious controversies, and even the so-called exact sciences have frequently been led astray by the same siren voice;" and afterwards adds that he does not refer to a mere show of language, which may deceive, but rather "to words that everybody uses, and which seem to be so clear that it looks like impertinence to challenge them." How very suggestive and teaching. The exact circumstances under which the use of the term *lepra* arose are not easy to determine. The Greek translators are supposed to have applied it to the *alphos*. The Greeks must have used the term *lepra* in a generic sense, for they called the boak, *lepra alphos*; and the *berat lebena*, *lepra leuce*. At any rate, the Arabians used the term thus widely, applying it to elephantiasis, and of course probably only followed in the footsteps of the Greeks, both peoples recognising in fact the old notion of the relation of *alphos*, *melas*, and *leuce*. Even in India, at the present day, the confusion of *lepra vulgaris* (*alphos*) and the eruptive stages of elephantiasis *græcorum* is very common, and Dr Carter pointedly refers to this. In fact, these states, always from the time of Moses, have been classed together in consequence of a certain similarity in outward aspect.

However this may be, clearly leprosy can be applied to none other than elephantiasis, and leprosy absorbs *lepra*, and herein Mr

Wilson is perfectly justified in his views. Let the discussion go on as it likes about the mere use of names, thus much is clear, that Mr Wilson's suggestion of the use of the word *alphos* to indicate our *lepra vulgaris* is not only the most classical but the most judicious under the circumstances. If *lepra* were claimed by no other disease, by all means retain it in its present application ; but this is not the case. Leprosy is clearly elephantiasis, and *lepra* belongs to it. *Alphos* is no invention coined to supply a deficiency.

This confusion of *alphos* and true leprosy, and its expressions (*morphœa alba* and *nigra*), is apparent, as before cursorily noticed, throughout all the Sacred Writings, in the descriptions ; but it is hardly a confusion, because the details of treatment are defined ; it is therefore rather an alliance ; and if we carefully study the concomitants, we shall observe that every fact connected with the two classes of cases only tends to prove that the diseases under notice of that and our own time are the same. In Exodus, chap. iv. verse 6, we read, " And the Lord said furthermore, Put now thine hand into thy bosom. And he put his hand into his bosom ; and when he took it out, behold, his hand was leprous as snow." Here is the general or wide use of the term leprous due to the translators. We find again, in Holy Writ, that some did and some did not dwell in places apart from the people, as in the case of Naaman and Gehazi, and the four lepers, on the other hand, who reported the flight of Benhadad's besieging army ; the cases of Ahaziah, 2 Kings, chap. xv. verse 5, who was smitten a leper, and " dwelt in a several house ;" and 2 Chron. chap. xxvi. verse 21-19, in reference to Uzziah, who was smitten leprous in his forehead, and abode in a several house. Again, in the time of Christ, some stood afar off, and were commanded to go show themselves to the priest, whilst others were touched and cleansed. Further, we observe how the exact rules laid down by Moses continued to be observed with a degree of exactness that is really remarkable, through the mid-life of the Hebrews, at the time of Christ, and even till this very day. (The Levitical code bears in the marginal reading of the Bible the date B. C. 1490, Ahaziah's time B. C. 800). These observances being enforced by universal consent against a disease which, as elephantiasis, is and has been well defined, and could not by any possibility be mistaken for anything else, so that the strict peculiar observance is a guarantee, under the circumstances, that the original disease has still an existence ; and, moreover, when we recollect the rigidity of the continued observance, it is easy to see in this an additional argument to prove that the so-called leprosy of Naaman and Gehazi, and that of those who stood afar off, and lived outside the city, were of different natures. There is the case I have mentioned of the *baras el Israili* and the *baras* of the Arabs existing side by side, affording to-day a complete illustration of the state of things centuries ago. *It is then wholly unnecessary to suppose the existence of a disease peculiar to the Jews ; their white scaly eruption, which did not render a man unclean, is our alphos.*

It may be as well, perhaps, to add, for the information of those who are not well acquainted with the subject, that the disease of Naaman was the boak of Moses, the alphos or, as we in general term it, *lepra vulgaris*. Let, then, alphos take the place of the latter in future. I pray not to be thought as forgetting the labours of early writers, Aretæus, Galen, Hippocrates, Paulus Ægineta, Avicenna, Schilling, Ousseel, Bateman, Mason Good, since I have confined myself especially to comments on Dr Carter's researches, and the clearly expressed views of Mr Erasmus Wilson; all, however, with the silent current of clinical observation, have settled, it appears to me, the dubious points in regard to elephantiasis, save the position and use of the word *lepra*,—an intrusion of the Greeks which we can well do without. Great value should be attached to the diagnosis of the eruption of true leprosy. I have lately seen a most remarkable example in a patient of Mr Erasmus Wilson, which was considered by every one who had seen it to be syphilitic. The subject was a gentleman holding an official post in India, and all the members of the medical staff reported upon the case as one of syphilitic disease; the individual was mercurialized and mercurialized again, of course without any effect of a beneficial kind.

Whilst upon the subject of leprosy, I may add one or two short notes on some few points which I have ascertained during my recent trip through the East. At Cairo, leprosy is met with amongst the Christians and the Hebrews. At Jerusalem, lepers are plentiful; there is no hospital, but a quarter of the town is set apart for them. The lepers mostly come from the surrounding villages, and are generally of Arab origin. At Nabûlus a like state of things is met with; there are some 200 lepers who live outside the town. A few lepers are found in other parts of the country, but they generally congregate at Nabûlus or Jerusalem. At Damascus there are now only four lepers in the leper hospital, two men and two women; the others, for there were many some years ago, were destroyed during the massacre which happened five years ago. These lepers come from around Mount Lebanon chiefly, and are mountaineers. There are other instances to be met with in the Hauran. It is said that there is no known case of leprosy in a Hebrew at the present time in Syria. Stray cases of leprosy you come across here and there in the various villages in the line of tour:—by leprosy I mean elephantiasis græcorum.

In the first place, it is clear that all these poor creatures have lived in the very foulest of dwellings, without ventilation, without any attempt at cleanliness, the same room often being occupied by animals and human beings together. The food, too, used by these folk is bad: rice, lentils, sour milk and rancid zibda, which is a kind of stock-grease or butter, made by boiling down fat and butter, with the view of keeping it eatable for some time. It appears, too, that a good proportion of the people about Damascus

consume olive-oil, which is often rancid. It would appear from what I have seen of the zibda or butter, that the people like things which are tasty and strong, and this is often arrived at by the addition of garlic to the very nasty fatty compound which they call zibda.

The evidence as to fish-eating habits is not altogether satisfactory. In Cairo, you meet with plenty of stale fish,—the native Christians and Jews eat it, especially a compound of preserved or potted fish which I think they call “fasciah.” You can obtain plenty of evidence as to the nature of this mess in one part of the city adjoining the Nile, where its preparation is carried on, in the horrible stench which quite sickens you. At Jerusalem there is plenty of stale fish in the bazaars, but it does not seem to be eaten especially by any particular class; besides, the lepers here come from various places afar off. At Nabûlus, the habit cannot be traced, nor indeed at Damascus; but what is pretty much the same thing as before remarked, there seems to be a good deal of rancid fatty matter used by those affected. Fish-eating habits, where the quality of the fish is bad and stale, seem to be a prominent feature in the history of lepers; the disease, in its widest migrations and topographical habitats, has always followed and does now follow, being confined almost to, the banks of large rivers and seacoasts in the most northern and cold as well as southern and warm climes. Elephantiasis on this account has been looked upon as a malarious fever; and where there is any exception to this rule, if there be not the evidence of actual ichthyophagic habits, yet is there of that which is pretty much the same thing, viz.: the consumption of rancid oleaginous substances. It would be well that our Indian inquirers should sift this matter thoroughly, and the analogous case of the consumption of bad rice. It is curious that in England, when leprosy was common, that there should have been a large consumption of fish; indeed, salmon was so plentiful that a special clause used to be inserted into the indentures of apprenticeship at Gloucester, that the apprentice should not be compelled to eat it more than twice or thrice a-day. The analogies in the medical history of leprosy, and such states as pellagra, which are in great degree dependent upon bad food, are very striking, and present interesting points for observation. It is worth observing, that lepers affirm that if they eat any oil at any time, the disease (especially the pains in the limbs) is much worse. At Nabûlus, the great cause of the continuance and extension of leprosy is the complete intermarriage of lepers which takes place, and one is really surprised that the government does not legislate in the matter. I fully believe that the interdiction of the marriage of lepers would almost, *per se*, be sufficient to eradicate the disease within the term of a century. The migration of leprosy is prevented by this one circumstance. Lepers have few children; of these latter, some escape the disease, but many become affected: this may happen at any

(early or late) age, generally, where hereditary transmission is very strongly marked, between the ages of six and ten. In Syria, it is thought that if intercourse take place during the period of menstruation, that the child begotten about that time is almost sure to be leprous. In Jerusalem, it is imagined by some that connexion with animals is a *vera causa*.

The form of leprosy is the tuberculous; it kills perhaps in from four to six years, or gets on to a certain pretty advanced stage, and then remains positively stationary for the rest of life. If treated in the early period, it is said to be susceptible of cure by mercurial remediation; but the evidence (three cases) on this point is very doubtful. Males are more liable than females to be affected in the proportion of about three to one. The disease is not known to be contagious in any way or degree. It has no relation to syphilis. This seems very clear: elephantiasis existed (and indeed is mentioned in the Koran under the name of "jezzam") long before syphilis was known in Syria. The latter was imported by the French, and to this day is known as the "Frank boil,"—a circumstance having of course a very important bearing upon the question of the relation of *lepra vulgaris* (alphos) and syphilis. If it be true that syphilis did not exist in eastern climes until within recent times, then is it a very significant argument against the non-syphilitic source of lepra. There are many authorities who think that *lepra vulgaris* is an old form of syphiloderma.

With regard to the contagiousness of leprosy, only one fact has come under my notice. It was that of a European who, in a tipsy state, cohabited with a leprous woman, and who, be the explanation what it may, actually became leprous, and in this patient the disease is progressing. In the East the disease is not considered to be contagious.

I have tried in this paper to explain away difficulties, and to harmonize the various observations of differing authorities. In conclusion, it would have been interesting to have traced out the modern relations of elephantiasis; but as this is rather a wide subject, its consideration must be attempted in a separate paper. Suffice it for the present to sum up as regards the past, that Moses clearly indicated the relation of three forms of eruption, two of which were early signs of elephantiasis, the third being similar, but distinct in nature. Celsus, not seeing any relation between these eruptions and fully developed elephantiasis, classed them together under the head of vitiligo; he, moreover, did not, as Moses did, differentiate the boak or alphos. The Greeks introduced the generic term lepra, particularizing each species by additional names, one of which, alphos, designated Moses' boak. The Arabians adopted the Greek ideas, and from their time to the present there has been a recognition of the view which is so completely confirmed by Dr Carter's observations, that the alphos (our *lepra vulgaris*) is a disease *sui generis*; and the two forms of eruption described by Moses, by the

Greeks under the terms *leuce* and *melas*, and by moderns *morphœa alba* and *morphœa nigra*, are modifications of one form of disease, and early stages or indications of that altered state of nutrition which results in true elephantiasis. That every fact tells against the theory that the Jews were affected by any form of disease peculiar to themselves, not the least being the existence of a form of eruption of ancient date in the East, known as *baras el Israili*, recognised distinctly as *alphos*, and as different from another form existing side by side, the *baras* of the Arabs, or our *morphœa*.

One word, in conclusion, in reference to the Leprosy Committee of the College of Physicians. I have very good reason to know, that a large number of reports have been returned to England from consuls and other non-medical men. Now, these must contain of course the prevalent opinion and prejudices of the people, some of which are most extraordinary; and inasmuch as no strictly medical criticism and analysis has been exercised in the selection of facts, a source of very considerable error may (if care be not taken) creep into and invalidate the labours of the committee, who of course deal only in great measure with what is actually, and in fact the equivalent of hearsay evidence.